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B. Tuberculosis in Psychotic Patients (Loewenstein's Method).

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A cooperative experiment was undertaken concerned with the direct cultivation of *B. tuberculosis* by the Loewenstein method from the blood of psychotic male patients at the Psychiatric Institute and Hospital.

Seven cc. of blood were introduced aseptically into a tube containing 3 cc. of a 10% solution of sodium citrate, sealed and sent by parcel post to Vienna. Bloods from male physicians and male attendants were sent as controls. Triplicate specimens of blood were taken from each subject at the same time. All tubes were numbered serially in New York. Professor Loewenstein did not know that the specimens were in triplicate. Neither did he know the diagnoses of any patients, nor that control subjects were included.

A careful physical examination of *all* patients and subjects by Dr. M. M. Harris, Research Associate in Internal Medicine, failed to reveal any clinical signs of active tuberculosis. This was further confirmed by radiographic examination. Dr. L. E. Hinsie, Research Associate in Psychiatry, not only vouched for the psychiatric diagnoses but took all of the blood samples. We are privileged to acknowledge our indebtedness to them.

Professor Loewenstein reported all of his findings before being informed of the diagnoses, etc. The results briefly summarized are as follows:

	No. Examined	No. + Macro. & Microscopic	No. + Microscopic Only
Dementia Praecox	34	15	5
Psychoneuroses	4	2	1
Manic-Depressive	2	1	
Inv. Melancholia	2	2	1
Total	42	20	7
Controls	12	0	0

Upon visiting Professor Loewenstein in his laboratory this summer after the findings were recorded, we found 13 cultures reported as macroscopically positive which had not yet been discarded. These were brought back to New York and guinea pigs were inoculated. (One culture was dried out.) All of the guinea pigs came down

with tuberculosis within 5 weeks after inoculation. All showed strongly positive tuberculin tests, local lesions at the site of injection, gross evidence of tuberculosis in the inguinal glands, spleen and liver, and stained smears revealed typical acid-fast bacilli. Cultures from these organs yielded macroscopic growth in all cases. Histological examinations proved positive.

This investigation is now being repeated and extended but so far has definitely established that *B. tuberculosis* could be recovered from the blood of approximately half of 42 male psychotic patients examined by the Loewenstein method in the absence of any clinical signs of tuberculosis, while the blood of 12 controls remained negative.

The interest and assistance of Dr. C. O. Cheney, Director, was invaluable during this investigation as was that of Lenore M. Kopeloff and John L. Etchells in our laboratory.

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Somatic Myogenic Action in Embryos of Fundulus Heteroclitus.

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Five phases in the development of motility in this species can be recognized. (A) Localized spontaneous contractions within the trunk (part attached to the yolk-sac) only; tail-bud, immotile. (B) All movements spontaneous; integrated contractions throughout the trunk, but slow in execution and relaxation; localized contractions only in the proximal part of the tail; distal part, immotile. (C) The general integrated contractions are quick; involving about the proximal half of the tail with the trunk; localized contractions only in the most distal myotomes of the region involved in the general integrated contractions, or just behind it, the more distal myotomes being immotile. This phase is marked by the beginning of tactile sensitivity. (D) The general contractions involve the entire trunk and tail; localized spontaneous contraction only at the tip of the tail and in the pectoral fin. (E) Localized movement of the tail has ceased, and the pectoral fin, like the caudal fin, becomes integrated with the total action pattern, without capability of local reflexes.

The skin of the embryo and yolk-sac being highly impervious to